

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 57137031  
PUBLICATION DATE : 24-08-82

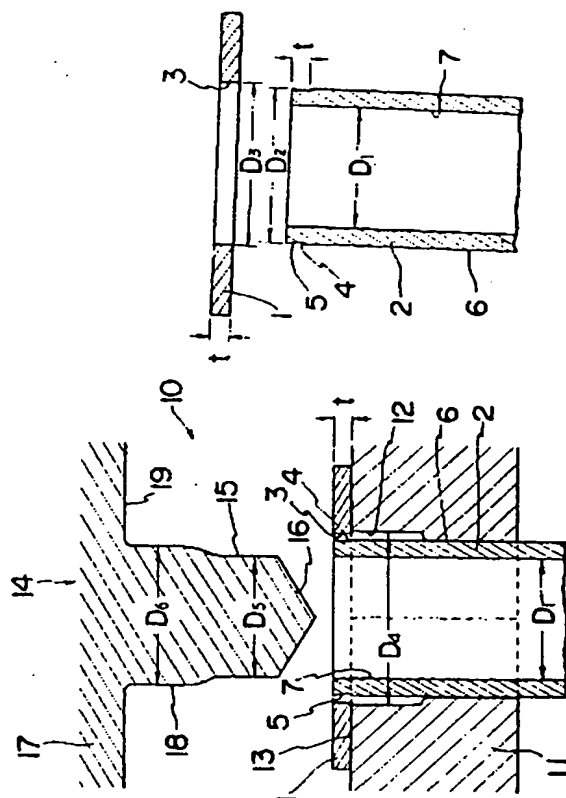
APPLICATION DATE : 19-02-81  
APPLICATION NUMBER : 56023820

APPLICANT : HINOHARA YOSHIHIDE;

INVENTOR : HINOHARA YOSHIHIDE;

INT.CL. : B21D 19/08 B21K 25/00 F16L 23/00

TITLE : JOINTING METHOD OF FLANGE TO  
STEEL PIPE



ABSTRACT : PURPOSE: To enable mass production and obtain excellent quality by expanding and pressure contacting an steel tube to a flange member having slightly larger inner diameter than outer diameter of the steel tube.

CONSTITUTION: A flange member 1 having slightly larger inner diameter  $D_3$  than outer diameter  $D_2$  of a steel tube 2 to be joined is blanked from a steel plate, and the member 1 is held by a holder 11 of an expanding press jig 10. After fitting it to the outer periphery of the end of the steel tube 2, an expanding die 14 of the jig 10 is thrust into the hole of the steel tube 2, outer diameter of the end of the steel tube is expanded and pressure contacted to the inner hole of the member 1. Thus, the member 1 is joined fast to the end of the steel tube 2 by internal stress of the member 1.

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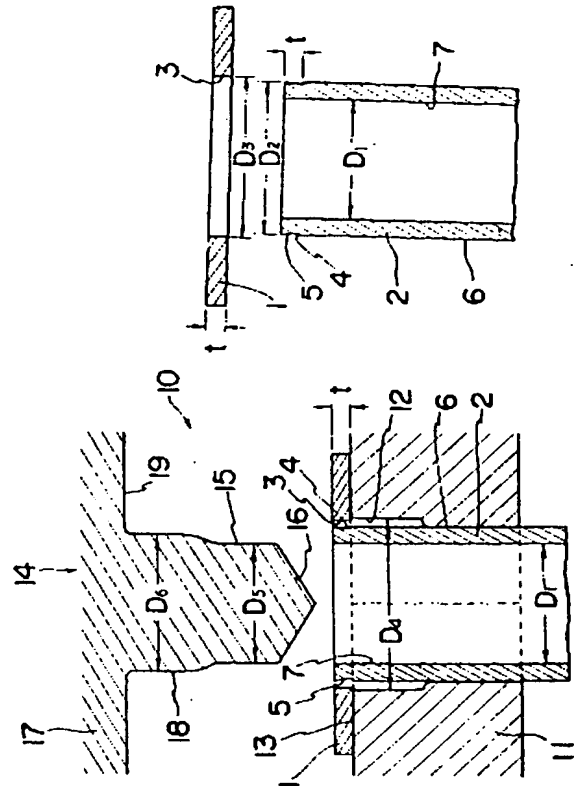
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